

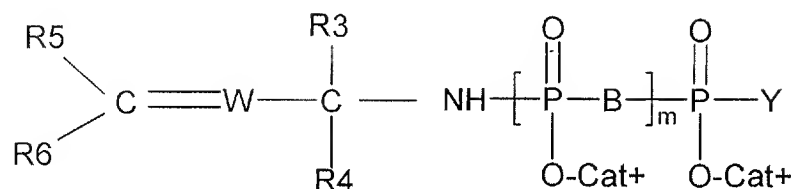
02/23/2010

In the Claims

1-22 (canceled).

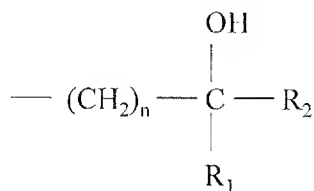
23 (currently amended). A compound selected from:

a)

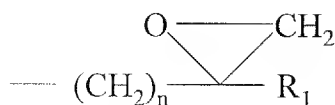


Formula (X)

in which R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is -CH- or -N-, R₆ is ~~an (C₂-C₃)acyl~~ a (C₂-C₃)acyl, an aldehyde, ~~an (C₁-C₃)alcohol, or an (C₂-C₃)ester~~ a (C₁-C₃)alcohol, or a (C₂-C₃)ester, Cat⁺ represents H⁺, Na⁺, NH₄⁺, K⁺, Li⁺, (CH₃CH₂)₃NH⁺, lysine or any other suitable pharmaceutically acceptable cation, B is O or NH, m is an integer from 1 to 3, and Y is O⁻Cat⁺, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF₂ or CH₂, and R is selected from the group consisting of:

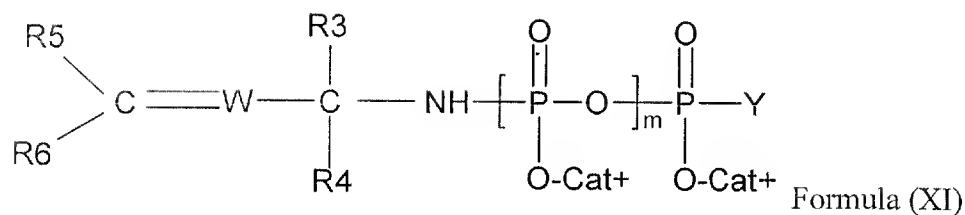


wherein n is an integer from 2 to 20, R₁ is a (C₁-C₃)alkyl group, and R₂ is ~~an halogenated~~ a halogenated (C₁-C₃)alkyl, a (C₁-C₃)alkoxy-(C₁-C₃)alkyl, ~~an halogenated~~ a halogenated (C₂-C₃)acyl or a (C₁-C₃)alkoxy-(C₂-C₃)acyl;

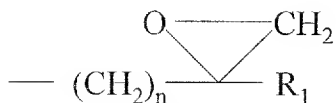


$$\begin{array}{c} \text{R}_3 \\ | \\ -\text{C}-\text{W}=\text{C} \\ | \quad \quad \quad / \quad \backslash \\ \text{R}_4 \quad \quad \quad \text{R}_5 \quad \text{R}_6 \end{array}$$

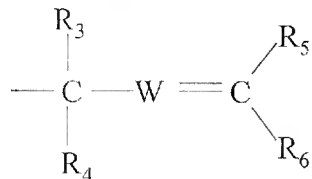
b)


$$\text{---}(\text{CH}_2)_n\text{---}\overset{\text{OH}}{\underset{\text{R}_1}{\text{C}}}\text{---R}_2$$

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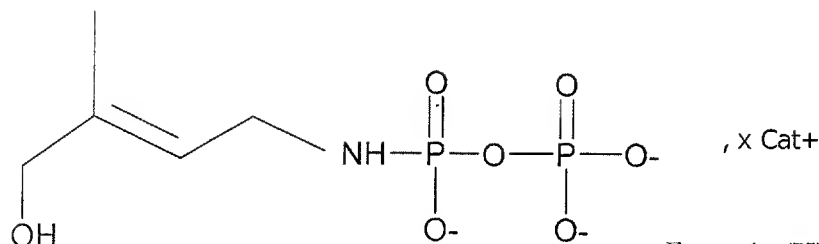


wherein n is an integer from 2 to 20, and R₁ is a methyl or ethyl group; and



wherein R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is -CH- or -N-, and R₆ is ~~an (C₂-C₃)acyl~~ a (C₂-C₃)acyl, an aldehyde, ~~an (C₄-C₃)alcohol~~, or ~~an (C₂-C₃)ester~~ a (C₁-C₃)alcohol, or a (C₂-C₃)ester; or

c)



Formula (XII) N-HDMAPP.

24 (previously presented). The composition according to claim 37, wherein said carrier is an adjuvant.

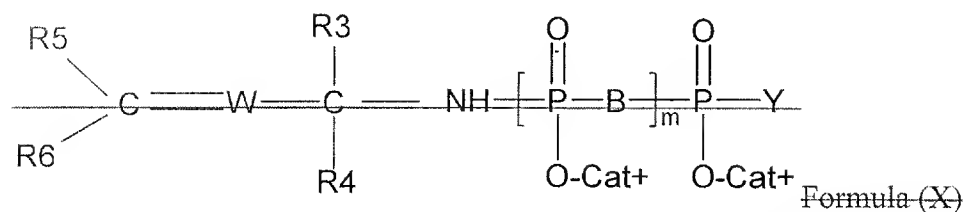
25 (previously presented). The composition according to claim 24, wherein said composition of matter further comprises an antigen selected from a microbial antigen, a viral antigen, a bacterial antigen, a fungal antigen, a protozoan antigen, a yeast antigen, a parasite antigen, a *Mycobacterium bovis* antigen or a tumoral antigen.

26 (previously presented). The composition according to claim 37, wherein said carrier is a pharmaceutically acceptable carrier.

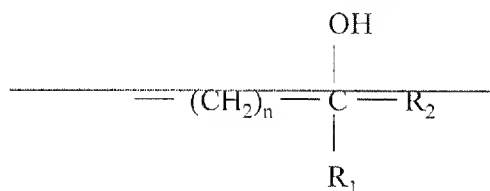
27-30 (canceled).

31 (currently amended). A method of activating a $\gamma\delta$ T cell, the method comprising bringing a $\gamma\delta$ T cell into contact with a composition comprising a pharmaceutically acceptable carrier and a compound according to claim 23 ~~$\gamma\delta$ T-cell activator selected from the group consisting of:~~

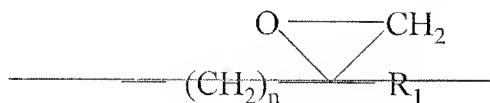
a)



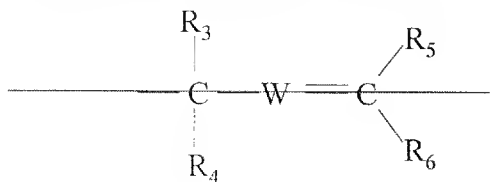
in which ~~R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is CH or N, R₆ is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester, Cat⁺ represents one or several identical or different organic or mineral cation(s) including the proton, B is O or NH, m is an integer from 1 to 3, and Y is O⁻Cat⁺, a nucleoside, or a radical A-R, wherein A is O, NH, CHF, CF₂ or CH₂, and R is selected from the group consisting of:~~



~~wherein n is an integer from 2 to 20, R₁ is a (C₁-C₃)alkyl group, and R₂ is an halogenated (C₁-C₃)alkyl, a (C₁-C₃)alkoxy (C₁-C₃)alkyl, an halogenated (C₂-C₃)acyl or a (C₁-C₃)alkoxy (C₂-C₃)acyl;~~

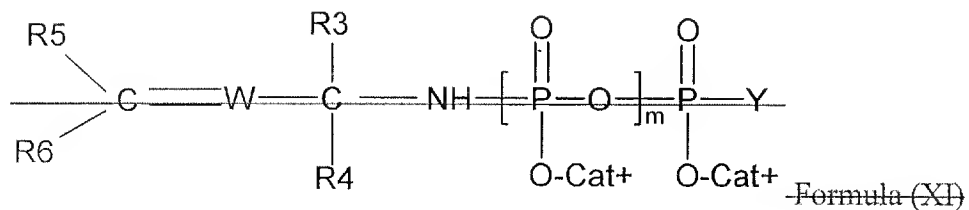


~~wherein n is an integer from 2 to 20, and R₁ is a methyl or ethyl group; and~~

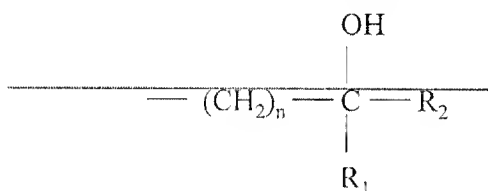


wherein R_3 , R_4 , and R_5 , identical or different, are a hydrogen or (C_1-C_3) alkyl group, W is CH or N , and R_6 is an (C_2-C_3) acyl, an aldehyde, an (C_1-C_3) alcohol, or an (C_2-C_3) ester;

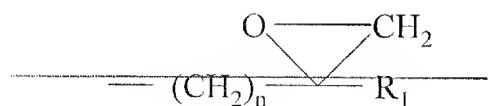
b)



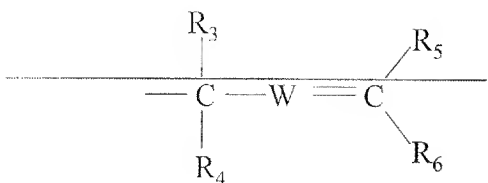
in which R_3 , R_4 , and R_5 , identical or different, are a hydrogen or (C_1-C_3) alkyl group, W is CH or N , R_6 is an (C_2-C_3) acyl, an aldehyde, an (C_1-C_3) alcohol, or an (C_2-C_3) ester, Cat^+ represents one or several identical or different organic or mineral cation(s) including the proton, B is O or NH , m is an integer from 1 to 3, and Y is O^-Cat^+ , a nucleoside, or a radical $A-R$, wherein A is O , NH , CHF , CF_2 or CH_2 , and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R_1 is a (C_1-C_3) alkyl group, and R_2 is an halogenated (C_1-C_3) alkyl, a (C_1-C_3) alkoxy (C_1-C_3) alkyl, an halogenated (C_2-C_3) acyl or a (C_1-C_3) alkoxy (C_2-C_3) acyl;

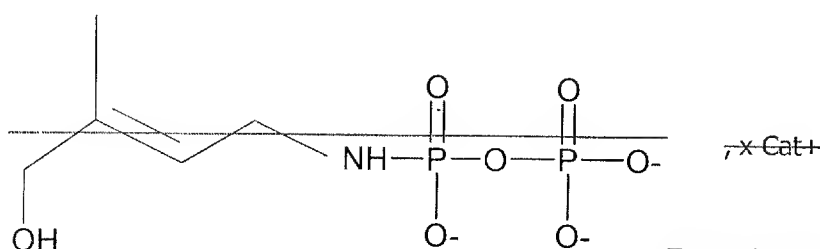


wherein n is an integer from 2 to 20, and R_1 is a methyl or ethyl group; and



wherein R_3 , R_4 , and R_5 , identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is CH or N, and R_6 is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester; and

e)

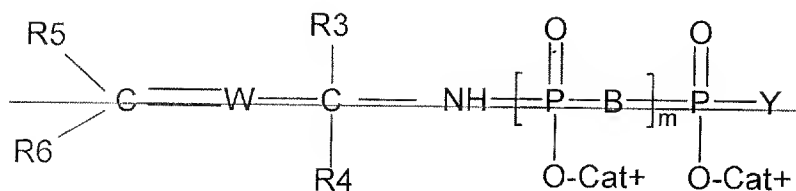


Formula (XII) ~~N-HDMAPP.~~

32 (previously presented). The method according to claim 31 wherein the $\gamma\delta$ T cell is brought into contact with said $\gamma\delta$ T cell activator in vitro.

33 (currently amended). A method of immunotherapy or stimulation of an immune response comprising the administration of a composition comprising a pharmaceutically acceptable carrier and a compound according to claim 23 ~~$\gamma\delta$ T cell activator selected from the group consisting of:~~

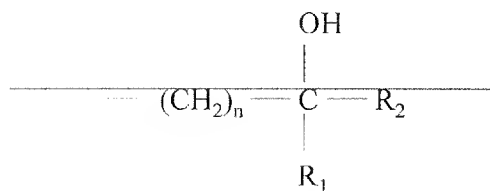
a)



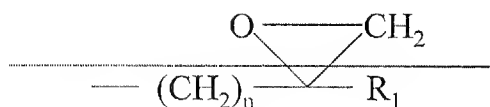
Formula (X)

in which R_3 , R_4 , and R_5 , identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is CH or N, R_6 is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester, Cat⁺ represents one or several identical or different organic or mineral cation(s) including the proton, B is O or NH, m is an

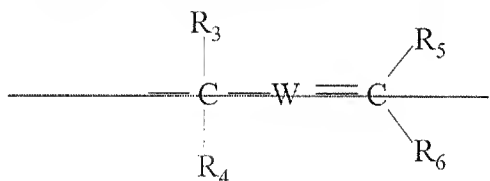
integer from 1 to 3, and Y is O⁻Cat⁺, a nucleoside, or a radical A-R, wherein A is O, NH, CHF, CF₂, or CH₂, and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R₁ is a (C₁-C₃)alkyl group, and R₂ is an halogenated (C₁-C₃)alkyl, a (C₁-C₃)alkoxy-(C₁-C₃)alkyl, an halogenated (C₂-C₃)acyl or a (C₁-C₃)alkoxy-(C₂-C₃)acyl;

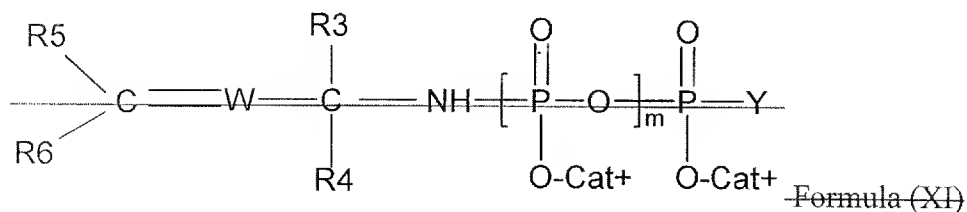


wherein n is an integer from 2 to 20, and R₁ is a methyl or ethyl group; and



wherein R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is CH or N, and R₆ is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester;

b)



in which R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is CH or N, R₆ is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester, Cat⁺ represents one or several identical or different organic or mineral cation(s) including the proton, B is O or NH, m is an

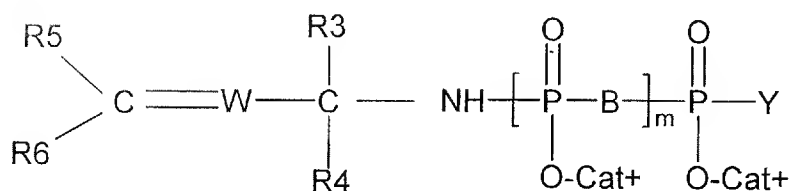
$$\begin{array}{c} \text{OH} \\ | \\ \text{---} (\text{CH}_2)_n \text{---} \text{C} \text{---} \text{R}_2 \\ | \\ \text{R}_1 \end{array}$$
$$\text{---}(\text{CH}_2)_n\text{---}\begin{array}{c} \text{O} \text{---} \text{CH}_2 \\ \diagup \quad \diagdown \\ \text{---} \text{R}_1 \end{array}$$
$$\begin{array}{c} \text{R}_3 \\ | \\ \text{---C}=\text{W}=\text{C---} \\ | \qquad \quad \diagup \quad \diagdown \\ \text{R}_4 \qquad \quad \text{R}_5 \qquad \text{R}_6 \end{array}$$
CC(C)C/C=C\C/C=C\CCCCNCP(=O)([O-])OP(=O)([O-])[O-].[Ca+2]>>CC(C)C/C=C\C/C=C\CCCCNCP(=O)([O-])OP(=O)([O-])[O-].[Ca+2]~~Formula (XII) N-HDMAPP.~~

34 (currently amended). The method according to claim 33, wherein said subject is suffering from a tumor, solid tumor, an infectious disease, ~~or an autoimmune disease or an allergic disease~~ or said subject requires the stimulation of an immune response.

35 (previously presented). The method according to claim 33, wherein said composition further comprises an antigen.

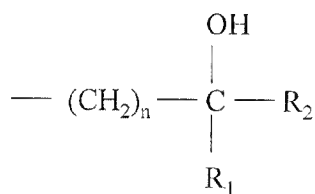
36 (currently amended). A composition comprising a carrier and a compound selected from:

i)

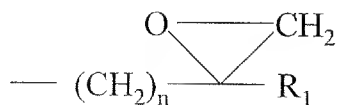


Formula (X)

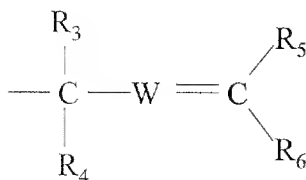
in which R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is -CH- or -N-, R₆ is ~~an (C₂-C₃)acyl~~ a (C₂-C₃)acyl, an aldehyde, ~~an (C₁-C₃)alcohol~~, or ~~an (C₂-C₃)ester~~ a (C₁-C₃)alcohol, or a (C₂-C₃)ester, Cat⁺ represents H⁺, Na⁺, NH₄⁺, K⁺, Li⁺, (CH₃CH₂)₃NH⁺, lysine or any other suitable pharmaceutically acceptable cation, B is O or NH, m is an integer from 1 to 3, and Y is O⁻Cat⁺, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF₂ or CH₂, and R is selected from the group consisting of:



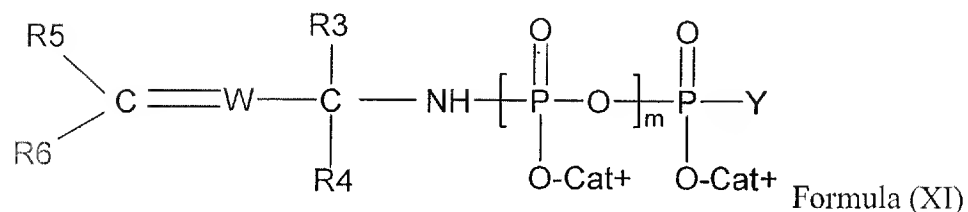
wherein n is an integer from 2 to 20, R₁ is a (C₁-C₃)alkyl group, and R₂ is ~~an halogenated a~~ halogenated (C₁-C₃)alkyl, a (C₁-C₃)alkoxy-(C₁-C₃)alkyl, ~~an halogenated a halogenated~~ (C₂-C₃)acyl or a (C₁-C₃)alkoxy-(C₂-C₃)acyl;



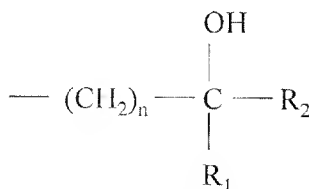
wherein n is an integer from 2 to 20, and R₁ is a methyl or ethyl group; and



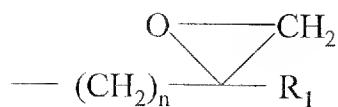
ii)



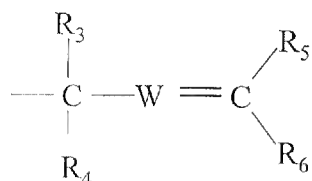
in which R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is -CH- or -N-, R₆ is ~~an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester~~ a (C₂-C₃)acyl, an aldehyde, a (C₁-C₃)alcohol, or a (C₂-C₃)ester, Cat⁺ represents H⁺, Na⁺, NH₄⁺, K⁺, Li⁺, (CH₃CH₂)₃NH⁺, lysine or any other suitable pharmaceutically acceptable cation, B is O or NH, m is an integer from 1 to 3, and Y is O⁻Cat⁺, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF₂ or CH₂, and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R₁ is a (C₁-C₃)alkyl group, and R₂ is ~~an~~ halogenated a halogenated (C₁-C₃)alkyl, a (C₁-C₃)alkoxy-(C₁-C₃)alkyl, ~~an~~ halogenated a halogenated (C₂-C₃)acyl or a (C₁-C₃)alkoxy-(C₂-C₃)acyl;

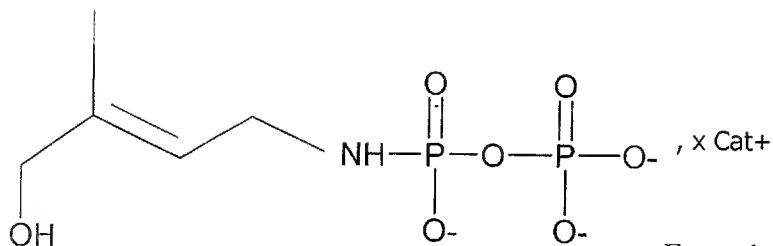


wherein n is an integer from 2 to 20, and R₁ is a methyl or ethyl group; and



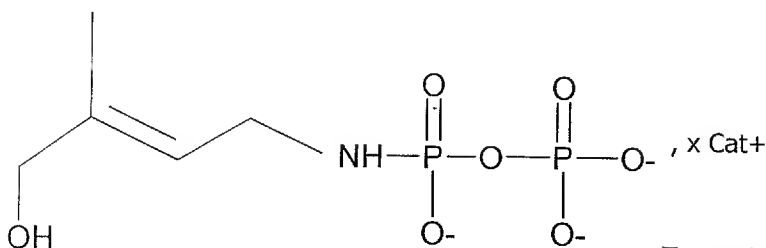
wherein R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is -CH- or -N-, and R₆ is ~~an (C₂-C₃)acyl~~ a (C₂-C₃)acyl, an aldehyde, ~~an (C₁-C₃)alcohol~~, or ~~an (C₂-C₃)ester~~ a (C₁-C₃)alcohol, or a (C₂-C₃)ester; or

iii)



Formula (XII) N-HDMAPP.

37 (previously presented). The composition according to claim 36, wherein said compound is:



Formula (XII) N-HDMAPP.

38 (new). The method according to claim 35, wherein said antigen is selected from a microbial antigen, a viral antigen, a bacterial antigen, a fungal antigen, a protozoan antigen, a yeast antigen, a parasite antigen, a *Mycobacterium bovis* antigen or a tumoral antigen.